

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P242502

Luminaire Tested: **S123DR-S560D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242502
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-15)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-S560D835-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2215.2 lumens
Efficiency: N/A
Efficacy: 117.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.25 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

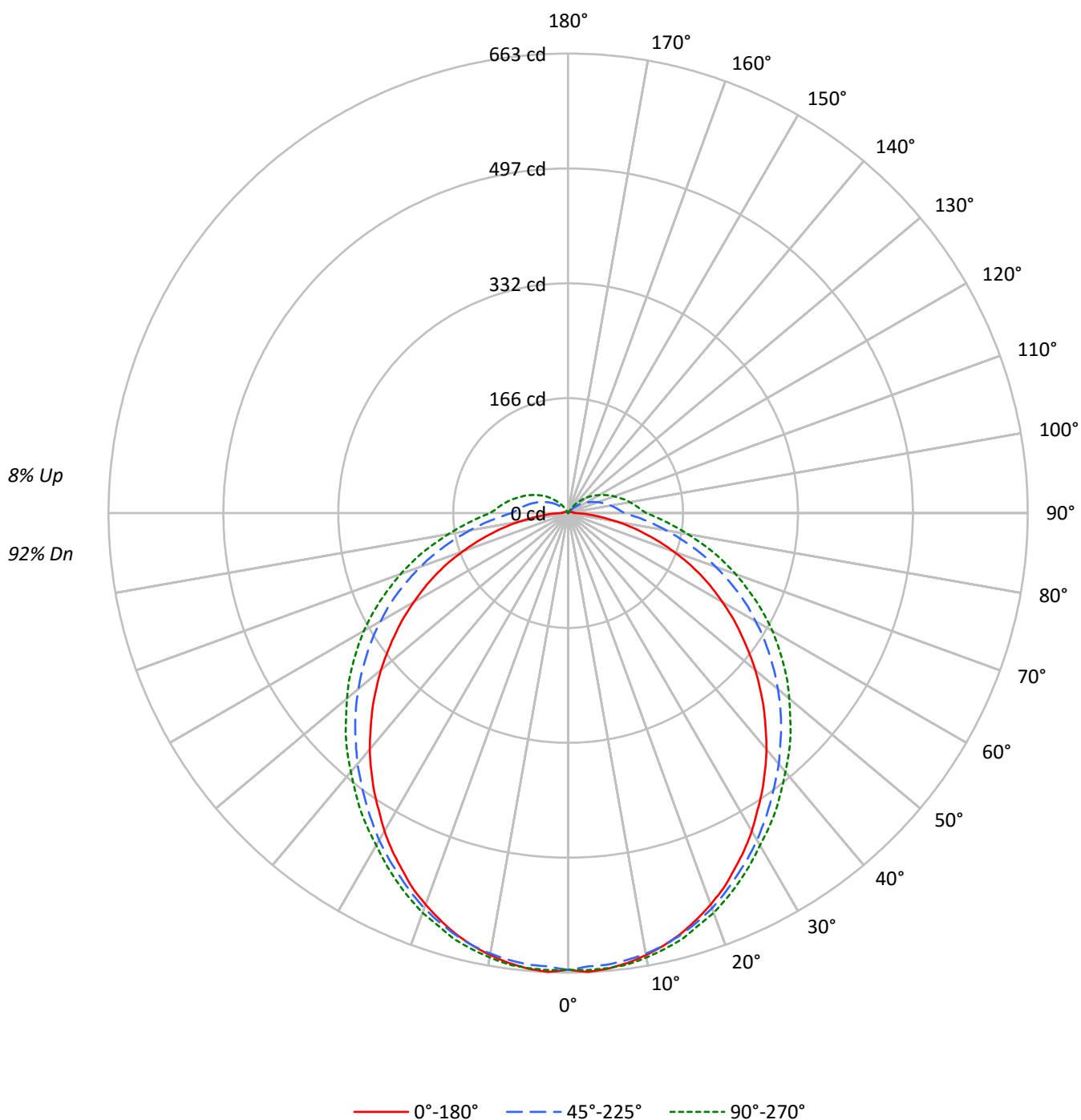
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242502

CATALOG NUMBER: S123DR-S560D835-X4F0-XX-UDD-D-W

Luminous Intensity Polar Plot



TEST NUMBER: P242502

CATALOG NUMBER: S123DR-S560D835-X4F0-XX-UDD-D-W

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	92		
1	105	100	95	90	102	97	92	88	91	87	84	85	82	80	80	78	76	73		
2	95	86	79	72	92	83	77	71	79	73	68	74	69	65	70	66	63	60		
3	86	75	67	60	83	73	65	59	69	62	56	65	59	54	61	56	52	50		
4	79	66	57	50	76	64	56	49	61	54	48	57	51	46	54	49	45	42		
5	72	59	50	43	70	58	49	42	54	47	41	52	45	40	49	43	39	36		
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	38	34	32		
7	62	48	39	33	60	47	38	32	45	37	32	42	36	31	40	35	30	28		
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25		
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22		
10	50	37	29	24	49	36	29	24	35	28	23	33	27	23	32	26	22	20		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7989	7989	7989
5°	8014	7774	7772
10°	7942	7581	7532
15°	7839	7365	7275
20°	7692	7120	6993
25°	7511	6843	6700
30°	7326	6592	6404
35°	7118	6327	6165
40°	6920	6086	5910
45°	6699	5853	5705
50°	6483	5622	5480
55°	6241	5386	5273
60°	6009	5144	5062
65°	5769	4889	4814
70°	5408	4600	4558
75°	4951	4269	4294
80°	4424	3939	3994
85°	3930	3689	3795

TEST NUMBER: P242502

CATALOG NUMBER: S123DR-S560D835-X4F0-XX-UDD-D-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.5	2.8
10°-20°	178.3	8.0
20°-30°	266.6	12.0
30°-40°	318.3	14.4
40°-50°	333.0	15.0
50°-60°	312.5	14.1
60°-70°	261.0	11.8
70°-80°	186.6	8.4
80°-90°	111.1	5.0
90°-100°	69.8	3.1
100°-110°	51.3	2.3
110°-120°	34.3	1.5
120°-130°	19.6	0.9
130°-140°	8.7	0.4
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	507.3	22.9
0°-40°	825.6	37.3
0°-60°	1471.1	66.4
0°-90°	2029.8	91.6
90°-120°	155.3	7.0
90°-150°	185.5	8.4
90°-180°	185.0	8.4
0°-180°	2215.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	659	659	659	659	659	
5°	660	658	654	660	659	63
15°	628	630	630	637	636	177
25°	567	574	577	586	586	261
35°	488	500	509	520	523	305
45°	399	416	434	448	454	308
55°	304	328	354	373	379	273
65°	210	238	270	292	299	208
75°	114	148	184	208	216	122
85°	35	71	109	134	141	36
90°	9	44	81	106	113	7
95°	8	36	71	93	100	6
105°	6	23	54	74	80	6
115°	4	12	38	55	61	4
125°	2	2	23	38	43	2
135°	1	1	9	22	25	1
145°	1	0	0	6	9	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

TEST NUMBER: P242502

CATALOG NUMBER: S123DR-S560D835-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	659.1	659.1	659.1	659.1	659.1
2.5°	662.7	660.6	654.8	660.6	659.9
5°	659.9	658.4	654.1	659.9	659.1
7.5°	654.8	654.8	650.5	657.7	657.0
10°	647.7	649.1	645.5	652.7	651.2
12.5°	639.0	641.2	639.0	645.5	644.1
15°	628.3	630.4	629.7	636.9	636.2
17.5°	615.3	619.7	618.9	625.4	624.0
20°	601.0	605.3	606.7	613.2	613.9
22.5°	585.9	590.2	592.4	601.0	600.3
25°	567.2	574.4	576.6	585.9	585.9
27.5°	549.3	557.2	561.5	569.4	570.1
30°	529.9	539.2	545.0	553.6	553.6
32.5°	508.4	519.1	527.0	536.4	538.5
35°	488.3	499.7	509.1	519.9	522.7
37.5°	466.7	479.6	490.4	502.6	504.8
40°	445.2	458.1	472.5	484.7	487.5
42.5°	421.5	438.0	453.1	466.7	471.0
45°	399.2	416.5	434.4	448.0	453.8
47.5°	375.5	394.9	415.0	430.1	434.4
50°	352.6	372.7	394.9	411.4	416.5
52.5°	328.1	349.7	374.8	392.0	398.5
55°	304.4	328.1	354.0	373.4	379.1
57.5°	281.5	305.9	333.9	353.3	359.7
60°	257.1	282.9	312.3	332.4	340.3
62.5°	234.1	260.6	292.2	312.3	319.5
65°	210.4	238.4	270.0	291.5	298.7
67.5°	186.7	216.1	247.7	271.4	277.2
70°	161.6	192.4	226.9	249.9	257.1
72.5°	138.6	169.5	205.4	229.1	236.2
75°	114.2	147.9	183.8	207.5	216.1
77.5°	93.3	127.1	163.0	188.1	194.6
80°	71.1	106.3	143.6	168.0	175.2
82.5°	51.7	87.6	125.7	150.1	157.2
85°	35.2	71.1	109.1	133.6	140.7
87.5°	21.5	57.4	94.1	118.5	125.7
90°	9.3	44.5	81.1	105.5	112.7
92.5°	8.6	39.5	75.4	99.1	105.5
95°	7.9	35.9	71.1	93.3	100.5
97.5°	7.2	33.0	66.8	88.3	95.5
100°	6.5	29.4	62.5	83.3	90.5
102.5°	5.7	25.8	58.2	78.3	85.4
105°	5.7	23.0	53.9	74.0	80.4
107.5°	5.0	20.1	49.5	68.9	75.4
110°	4.3	17.2	46.0	64.6	70.4

TEST NUMBER: P242502

CATALOG NUMBER: S123DR-S560D835-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.3	14.4	41.6	59.6	66.1
115°	3.6	12.2	38.1	55.3	61.0
117.5°	3.6	9.3	33.7	51.0	56.7
120°	2.9	6.5	30.2	46.7	51.7
122.5°	2.9	4.3	26.6	42.4	47.4
125°	2.2	2.2	23.0	38.1	43.1
127.5°	2.2	1.4	19.4	33.7	38.8
130°	2.2	1.4	15.8	29.4	33.7
132.5°	1.4	1.4	12.2	25.1	30.2
135°	1.4	0.7	8.6	21.5	25.1
137.5°	1.4	0.7	5.7	17.2	20.8
140°	0.7	0.7	2.9	13.6	17.2
142.5°	0.7	0.0	0.0	9.3	12.9
145°	0.7	0.0	0.0	5.7	8.6
147.5°	0.0	0.0	0.0	2.2	5.0
150°	0.0	0.0	0.0	0.0	1.4
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)